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Documentary as indicated. (Information specifically requested.)

RECENTLY PUBLISHED RESEARCH OF THE INSTITUTE OF GENERAL AND INORGANIC CHRMISTRY, ACADELY OF SCI NC S OF THE USSR, MOSCOW

"Coordination Number in the Structure of Some Liquids," O. Ya. Samoylov, Inst Gen and lnorg Chem, Acad Sci USSR

"Zhur Fiz Khim" Vol 20, 1946, pp 1411-14,

When temperature increases, the coordination number within a liquid can decrease because of an increase in the number of holes, or increase, because the structure becomes less regular and some holes are filled with molecules. A, Me, Hg, da, Sn, etc., belong to the first, and H20 belongs to the second group.

"Direct Reduction of Oxidized and Silicate-Oxidized Nickel-Cobalt Ores," D. P. Bogatskiy, Inst Gen and Inorg Chem: Inst Monferrous Metals, Moscow

"Bull Acad Sci URSS, Classe Sci Tech" 1946, pp 1809-22

Eight ores having various percentages of di, fe, SiO, MgO, CaO, Al2O3, S, and ignition Toss are investigated. Reduction experiments were carried out with oras ground to 60-100 mesh at temperatures between 100 and 1100°, and thermographic investigations were conducted. Results of direct reduction with H and SC are given in terms of Fe, percentage of Mi

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in the reduction products, and the degree of reducibility A = percentage of Ni reduced, from 100 to 1,000°. From the fact that Ni is reduced at as low as 300° at which temperature only NiO, not Ni silicates, are reducible, indicates that even in silicate ores Ni is present not as silicate; this is borne out by the often encountered ease of leaching Ni out from these ores with acids. The temperatures of complete extraction of Ni by reduction with H₂ and with CO from both silicate and oxidized ores are given. The effect of duration of the reduction process depends on the sort of ore and on temperature. Ni obtained by reduction with H₂ possesses a particularly high reactivity in hydrometallurgical applications, in contrast to Ni reduced by CO and C; low reduction temperature is favorable from this viewgoint.

"Solubility in the System CaCO4-CaSO4-NaCl-CO2-H2O at 250," E. B. Shternina, E. V. Frolová, Inst Gen and Inorg Chem, Acad Sci USSR

"Compt Rend Acad Sci URSS" Vol 47, 1945, pp 33-5
"Dok Akad Nauk SSSR" Vol 47, 1945, pp 34-6,

The sclubilities of CaCO₃ and CaSO, in water containing 0-2% NaCl at CO₂ pressures of 0.0013-1.0 atmosphere are given. The data are expressed graphically in terms of the Ca(HCO₃)₂ and CaSO, contents of the solutions at equilibrium. Use of the results to predict solution of calcite and gypsum in river waters is indicated.

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